

Application No. 09/821,539
Reply to Office Action of July 7, 20003

Attorney Docket No. 81880.0096

REMARKS/ARGUMENTS:

Claims 2 and 3 are amended. New claims 4-13 are added. Support for new claim 4 can be found on p. 14, lines 2-5 of the specification. Support for new claim 5 can be found on p. 14, lines 7-8 of the specification. Support for new claims 6 and 7 can be found on p. 15, lines 5-6 of the specification. Support for new claim 8 can be found on p. 14, lines 2-5 of the specification. Support for new claim 9 can be found on p. 9, lines 11-16 of the specification. Support for new claim 10 can be found on p. 11, lines 19-22 of the specification. Support for new claims 11 and 12 can be found on p. 16, lines 9-11 of the specification. Support for new claim 13 can be found on p. 14, lines 2-5 of the specification. Claims 1-13 are pending in the application. No new matter is added. Reexamination and reconsideration of the application, as amended, are respectfully requested.

The present invention is directed to an optical device module in which an optical fiber can derive optical output stably from an optical device packaged in the module, even in use under the circumstances of the package extending or contracting due to environmental temperature changes. Another object is to provide an optical device module having an easy and secure airtight sealing structure which can decrease in the number of the fabricating steps, and increase in productivity of the modules. (Applicant's specification, at p. 5, line 24-p. 6, line 8).

CLAIM REJECTIONS UNDER 35 U.S.C. § 102:

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Nagata et al. (U.S. Patent No. 5,727,105). The Applicant respectfully traverses this rejection. Claim 1 is as follows:

An optical device module comprising:
an optical device;

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an optical fiber, an end portion of which is optically coupled to the optical device;

a package containing the optical device and the optical fiber; and
an insertion tube fixed through the wall of the package, the optical fiber extending through the insertion tube out of the package,

wherein the end portion of the optical fiber is offset with respect to a fixed portion of the optical fiber, which fixed portion is below the end portion and which fixed portion is sealed within the insertion tube, to bend the optical fiber between the end portion and the fixed portion of the optical fiber, and

wherein an axis of the fixed portion is parallel to an axis of the end portion.

Applicant respectfully submits that Nagata cannot anticipate claim 1 because Nagata fails to teach an end portion of an optical fiber, which is optically coupled to an optical device.

According to the present invention, an axis of an optical fiber at the end portion whose end surface is coupled to an optical device is offset with respect to an axis of the optical fiber at a fixing portion where the fiber is fixed through a wall of a package which contains the optical device and the part of the fiber so as to bend the optical fiber in a region of between the end portion of the fiber and the fixing portion within the package. (Applicant's specification, at p. 6, lines 9-16). The offset between the axis of the optical fiber at the end portion and the axis thereof at the fixing portion allows the optical fiber to naturally bend. This offers the advantage that the bent fiber can absorb the expansion and contraction of the package length due to the temperature change of the environment, resulting in preventing effectively fluctuation output of the optical fiber and deterioration of the optical fiber. (Applicant's specification, at p. 6, lines 9-16).

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In Nagata, however, it is not an end portion of the optical fiber that is coupled to the optical device. The end portions of the optical fiber 76a and 76b are introduced into the connecting passage 68 through the optical fiber-fixing means 75a and 75b. (Nagata, column 10, lines 28-34; Figure 13). Therefore, neither end is coupled to the optical device 21. The Office refers to 81a as being an end portion. However, neither 81a nor 81b are end portions. Instead, 81a and 81b represent fiber sections within the main chamber 66. (Nagata, column 10, lines 43-49; Figure 13).

In light of the foregoing, Applicant respectfully submits that Nagata could not have anticipated or rendered obvious claim 1, because Nagata fails to teach or suggest each and every claim limitation. Withdrawal of this rejection is thus respectfully requested.

ALLOWABLE SUBJECT MATTER:

The Office objected to claims 2 and 3 as being dependent upon a rejected base claim, but states that claims 2 and 3 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." In response, Applicant rewrote claims 2 and 3 in the manner suggested by the Office. Withdrawal of this objection and allowance of claims 2 and 3 is thus respectfully requested.

New claims 4 and 5 depend from claim 1 and are patentable for at least the same reasons as claim 1.

New claims 6-8 depend from claim 2 and are patentable for at least the same reasons as claim 2.

New claims 9-13 depend from claim 3 and are patentable for at least the same reasons as claim 3.

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In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6810 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

Date: October 3, 2003

By: _____

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